

Application No.: 10/714,403Docket No.: 2038-307AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-12. (canceled)

13. (currently amended) An article turning apparatus, comprising:

first and second stations at which a plurality of articles are to be successively loaded and unloaded, respectively;

a rotary base rotatable about a stationary shaft, said first and second stations being positioned in a peripheral zone of said rotary base; and

a plurality of load-carrying tables arranged at regular intervals along said peripheral zone, said load-carrying tables being adapted to carry thereon said articles and including first and second load-carrying tables rotatably mounted on said rotary base so as to be rotated around their own axes while moving along with said peripheral zone as said rotary base rotates;

wherein

said first and second load-carrying tables are alternately arranged on said rotary base so that each of said second load-carrying tables is interposed between one pair of said first load-carrying tables;

said first and second load-carrying tables are rotated around their own axes in opposite directions while being moved by said rotary base from said first station to said second station as said rotary base rotates; and

said apparatus further comprises

first and second belts trained around a portion of said stationary shaft and a portion of said

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first and second load-carrying tables, respectively, wherein a rotational movement of said rotary base about the portion of said stationary shaft causes said first and second belts to travel about said stationary shaft which belts, in turn, will cause said first and second load-carrying tables, respectively, to rotate about their own axes in the opposite directions;

The apparatus according to claim 1, further comprising a suction box common to all said load-carrying tables; and

a motor for rotating said rotary base;

each of said load-carrying tables comprising a plurality of through holes which are in fluid communication with said suction box only when said load-carrying table travels from said first station toward said second station.

14. (previously presented) The apparatus according to claim 13, wherein said suction box includes an elongated opening extending along a path on which said load-carrying tables travel from said first station to said second station.

15. (previously presented) The apparatus according to claim 14, further comprising, for each of said load-carrying tables, a hollow shaft which is attached to said load-carrying table, is rotatably supported by said rotary base and has opposite upper and lower open ends, wherein said load-carrying table has a plurality of through holes in fluid communication with the upper open end of said hollow shaft, the lower open end of said hollow shaft being in fluid communication with said elongated opening of said suction box only when said load-carrying table is on said path.

16. (previously presented) The apparatus according to claim 15, further comprising on each of the hollow shafts of said first load-carrying tables, a pulley around which said belt is trained;

on each of the hollow shafts of said second load-carrying tables, a pulley around which another belt is trained, said another belt is also trained around said portion of the stationary shaft.

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17. (previously presented) The apparatus according to claim 14, wherein said elongated opening has a first and second ends located at first and second stations, respectively, an inner cross section of said elongated opening at said first end is larger than at said second end, thereby inducing different suction forces at said first and second ends and facilitating transfer of said articles at said first and second stations.

18. (previously presented) The apparatus according to claim 13, wherein the through holes of a maximum of two said load-carrying tables are in fluid communication with said suction box at a time.

19. (canceled)

20. (currently amended) An article turning apparatus, comprising:

first and second stations at which a plurality of articles are to be successively loaded and unloaded, respectively;

a rotary base rotatable about a stationary shaft, said first and second stations being positioned in a peripheral zone of said rotary base; and

a plurality of load-carrying tables arranged at regular intervals along said peripheral zone, said load-carrying tables being adapted to carry thereon said articles and including first and second load-carrying tables mounted on said rotary base so as to be rotatable around their own axes while moving along with said peripheral zone as said rotary base rotates;

wherein

said first and second load-carrying tables are alternately arranged on said rotary base so that each of said second load-carrying tables is interposed between one pair of said first load-carrying tables;

said first and second load-carrying tables are rotated around their own axes in opposite

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directions while being moved by said rotary base from said first station to said second station as said rotary base rotates;

said apparatus further comprises a suction box common to all said load-carrying tables and a motor for rotating said rotary base; and

each of said load-carrying tables comprises a plurality of through holes which are in fluid communication with said suction box only when said load-carrying table travels from said first station toward said second station.

21. (previously presented) The apparatus according to claim 20, wherein said suction box includes an elongated opening extending along a path on which said load-carrying tables travel from said first station to said second station.

22. (previously presented) The apparatus according to claim 21, further comprising, for each of said load-carrying tables, a hollow shaft which is attached to said load-carrying table, is rotatably supported by said rotary base and has opposite upper and lower open ends, wherein said load-carrying table has a plurality of through holes in fluid communication with the upper open end of said hollow shaft, the lower open end of said hollow shaft being in fluid communication with said elongated opening of said suction box only when said load-carrying table is on said path.